

Amendments to the Claims

This listing of claims will replace the originally filed claims in the application.

Listing of Claims:

Claims 1 – 12 (cancelled).

Claim 13 (new): A method of operating a production plant comprising at least one unit for treating at least one gas mixture, said unit delivering at least one fluid to a consumer and being supplied with electricity, in which method:

- a) the treatment unit is operated during periods in which the cost of electricity is above a first predefined threshold and during periods in which the cost of electricity is below a second predefined threshold, the first threshold being greater than or equal to the second threshold;
- b) during at least one period in which the cost of electricity is below the second threshold, at least one portion of one of the at least one fluid is stored, in liquid and/or gaseous form, in at least one storage tank (9);
- c) during at least one period in which the cost of electricity is above the first threshold, one of the at least one fluid is delivered to the consumer at least partly from the storage tank after a vaporization step if it is stored in liquid form; and
- d) during at least one period in which the cost of electricity is below the second threshold, at least one fluid is produced, in a line of the treatment unit, with a predefined purity, a predefined flow rate, a predefined temperature and a predefined pressure in the treatment unit;

wherein, during at least one period in which the cost of electricity is above the first threshold, the power consumption of the treatment unit is reduced, relative to the power consumption of the treatment unit when the cost of electricity is below the second threshold, and all or a portion of the fluid having a predefined purity, a predefined flow rate, a predefined temperature, and a predefined pressure is produced in the line of the treatment unit with a purity below the predefined purity and/or a flow rate below the predefined flow rate and/or a temperature below the predefined temperature and/or a pressure below the predefined pressure and is sent elsewhere than to a consumer, possibly being at least partly vented.

Claim 14 (new): The method of claim 13, in which the treatment unit is an air separation apparatus that produces at least one stream enriched with gaseous oxygen and/or at least one stream enriched with gaseous nitrogen and/or at least one stream

enriched with argon and/or at least one stream enriched with liquid oxygen and/or at least one stream enriched with liquid nitrogen and/or at least one stream enriched with liquid argon as final product(s).

Claim 15 (new): The method of claim 13, in which, during a period in which the cost of electricity is above the first threshold, the total power consumption of the treatment unit is reduced by at least 25%, preferably by at least 50%, relative to the power consumption of the treatment unit operating when the cost of electricity is below the second threshold.

Claim 16 (new): The method of claim 13, in which during at least one period in which the cost of electricity is above the first threshold, at least one product of the treatment unit is at least partly produced with approximately the same purity, and:

- a) with either a reduced flow rate relative to the flow rate at which it is produced, during at least one period in which the cost of electricity is below the second threshold; or
- b) with approximately the same flow rate as that at which it is produced, during at least one period in which the cost of electricity is below the second threshold.

Claim 17 (new): The method of claim 14, in which at least one of the products of the treatment unit that is produced with approximately the same purity as that at which it is produced during at least one period in which the cost of electricity is below the second threshold is a nitrogen-enriched stream and/or an argon-enriched stream.

Claim 18 (new): The method of claim 13, in which the treatment unit treats at least one gas mixture throughout the periods in which the cost of electricity is above the first threshold.

Claim 19 (new): The method of claim 18, in which a compressor forming part of the treatment unit compresses a gas mixture intended for or coming from the treatment unit and when the cost of electricity is above the first threshold, the compressor operates with reduced load, at least one portion of the compressed gas mixture being vented to atmosphere.

Claim 20 (new): The method of claim 13, in which less liquid is produced when the cost of electricity is above the first threshold than when the cost of electricity is below the

second threshold, or no liquid is produced when the cost of electricity is above the first threshold.

Claim 21 (new): The method of claim 13, in which the fluid sent to the storage tank is of approximately constant purity.

Claim 22 (new): A production plant, comprising:

- a) at least one unit for treating at least one gas mixture, delivering at least one fluid to a consumer and supplied with electricity;
- b) means for making the treatment unit operate during periods in which the cost of electricity is above a first predefined threshold and during periods in which the cost of electricity is below a second predefined threshold, the first threshold being greater than or equal to the second threshold;
- c) at least one storage tank and means for storing at least one portion of the fluid, in liquid and/or gaseous form, in the storage tank during at least one period in which the cost of electricity is below the second threshold;
- d) means for delivering the fluid to the consumer from the storage tank, after a vaporization step if it is stored in liquid form, during at least one period in which the cost of electricity is above the first threshold; and
- e) means for producing, via a line of the treatment unit, at least one fluid having a predefined purity, a predefined flow rate, a predefined temperature and a predefined pressure in the treatment unit during at least one period in which the cost of electricity is below the second threshold;

wherein said production plant comprises:

- i) means for producing the fluid via the line with a purity below the predefined purity and/or a flow rate below the predefined flow rate and/or a temperature below the predefined temperature and/or a pressure below the predefined pressure;
- ii) means for operating the treatment unit in such a way that, during at least one period in which the cost of electricity is above the first threshold, the power consumption of the treatment unit is reduced relative to the power consumption of the treatment unit during the period in which the cost of electricity is below the second threshold; and
- iii) means for sending the fluid produced and/or at least one portion of the gas mixture, particularly air, other than to the consumer, during this period in which the cost of electricity is above the first

threshold, preferably only during this period in which the cost of electricity is above the first threshold.

Claim 23 (new): The plant of claim 22, which comprises a compressor for compressing a gas mixture intended for or coming from the treatment unit, means for sending the compressed gas mixture to the treatment unit and means for venting the compressed gas mixture.

Claim 24 (new) The plant of claim 22, which comprises means for delivering the fluid to the consumer from at least one storage tank, after a vaporization step if it is stored in liquid form, only during at least one period in which the cost of electricity is above the first threshold.